### FOURTEENTH CENSUS OF THE UNITED STATES: 1920

DEPARTMENT OF COMMERCE

## BULLETIN

BUREAU OF THE CENSUS SAM. L. ROGERS, DIRECTOR

# CENSUS OF GUAM

#### INTRODUCTION. 1

This bulletin presents the results of the census of the island of Guam, which was taken by the Governor of Guam in accordance with plans prescribed by the Director of the Census, as required by the act of Congress approved March 3, 1919, providing for the Fourteenth and subsequent decennial censuses of the United States.

Geography.—Guam, the largest and southernmost island of the North Pacific group known as the Marianne or Marianas Islands, lies in latitude 13° 13′ to 13° 40′ north and in longitude 144° 37′ to 144° 58′ east of Greenwich. The island is located 5,053 nautical miles southwest of San Francisco, 3,337 nautical miles west by south of Honolulu, and 1,506 nautical miles east of Manila. It is about 30 miles in extreme length and from 4 to 8½ miles in width, its estimated area being 225 square miles. It extends almost north and south, the southern half lying slightly to the westward of the northern half.

The northern half of the island is a high, densely forested plateau ranging in elevation from 200 to 500 feet and is but sparsely settled. The southern part of Guam is mountainous. A chain of hills ranging in altitude from 700 to 1,300 feet begins near Pago Bay on the east coast, crosses the island to the west coast near the city of Agana, and follows that coast to the extreme southern end of the island. East of this coastal range is a high plateau, which terminates in abrupt cliffs at or near the eastern seacoast and is intersected by the valleys of five rivers, that have their sources near the top of the coastal range and, crossing nearly the whole width of the island, empty into the sea on the east coast. On the west coast the mountains merge into low foothills at some distance from the sea, leaving narrow strips of rolling land along the seashore suitable for agriculture. The east coast of the southern half of the island is indented by numerous bays bordered by narrow strips of fertile beach land. Coconut groves are planted near the sea, together with patches of corn, taro, and camotes.

The mountains of Guam are clearly of volcanic origin. Most of them are bare of forests, but are covered with shrubs and grasses. The mountains extending from the town of Agat on the west coast southward to Facpi Point are, however, heavily wooded.

ws that coast to the sland. East of this which terminates in seacoast and is intervers, that have their I range and, crossing and, empty into the sland, scarred the mountain sides with great land-

slides, and caused some loss of life. The fiscal losses sustained by the insular government were so heavy that it became necessary to send the American school-teachers home, close all the native schools, and suspend all public works. In February, 1903, and again in December, 1909, less violent earthquakes were felt.

Government.—The island of Guam, which had been under the dominion of Spain for over 300 years preceding the outbreak of the Spanish-American War, was seized on June 21, 1898, by Capt. Henry Glass, of the United States Navy, who, having made prisoners of the Spanish governor and the military garrison, sailed the same day for Manila. The island was ceded by Spain to the United States on December 10, 1898, by the treaty of Paris, and on December 23, 1898, the

Climate.—The climate of Guam, although tropical, is, on the whole, healthful and pleasant. For six months of the year the northeast and east-northeast trade winds prevail, during which time there is relatively little rainfall; but from June to November the southwest monsoon blows at frequent intervals, bringing very abundant precipitation. During the rainy season the average monthly rainfall varies from 5 to 15 inches.

The mean annual temperature is \$1°, and it is nearly constant throughout the year; the daily variation is small, the mean maximum temperature being 88° and the mean minimum 72°. There is always a constant breeze, even during the clearest and hottest months. Although typhoons are rather numerous during the rainy season, the island is seldom visited by destructive hurricanes. One of the most disastrous of these occurred on November 13, 1900, destroying all the crops and fruits and many houses.

<sup>1</sup> For a detailed description of the geography, climate, government, etc., of Guam, see "The Island of Guam," U. S. Navy Department, Washington, D. C., 1917.

There is no good harbor in Guam. The harbor of Apra is so shallow and so full of shoals that it is not navigable by large vessels, and the absence of breakwaters makes it unsafe during typhoons. At present vessels anchor in the deep water outside of the harbor, and passengers and freight are ferried through a shallow channel dredged across the reefs to the port of Piti, a distance of about 2 miles.

President of the United States, by Executive order, placed the island under the control of the Navy Department. In compliance with that order, Commander Edward D. Taussig landed on the island February 1, 1899, took formal possession in the name of the United States, and raised the American flag over the governor's palace at Agana.

The present government of the island is known officially as the "Naval Government of Guam." The governor is appointed by the President of the United States, upon the recommendation of the Secretary of the Navy. All other officials, judicial as well as executive, are subordinate to him and are appointed and removed at his pleasure. The governor enacts all laws and is, in theory at least, responsible only to the President. The governor is also the commandant of the naval station.

For administrative purposes the island is divided into six districts, namely, Agana, Agat, Inarajan, Merizo, Sumay, and Yona. Each administrative district is in charge of a native commissioner, who is usually assisted by a deputy commissioner.

#### POPULATION.

Censuses.—The annual reports of the Governor of Guam give the total number of native and foreign-born inhabitants separately, and the nationality of the foreign-born population. The local census of 1901 showed the total population by sex. The present census shows the population of each barrio, city, and town by sex and race or color (see Table 19, p. 8), and the total population of the island by age, sex, and marital condition, together with data in regard to school attendance, illiteracy, and occupations.

Population growth.—The census of 1920 is the first ever taken in Guam under the supervision of the United States Bureau of the Census. The first enumeration of the population of the island after its occupation by the United States Government was made in 1901, under the direction of the second naval governor. The following table shows the population of Guam at the census of 1920 and the population as reported by the governor in each specified year prior to 1920:

TABLE 1.—POPULATION: 1901 TO 1920.1

YEAR.	Pepulation.	YEAR.	Population.
1920 2 1919. 1918. 1917. 1916.	13,275 14,165 14,344 13,916 13,491 12,652	1912. 1910. 1909. 1908. 1901.	12,339 11,806 11,546 11,318 9,076

<sup>&</sup>lt;sup>1</sup> Not including the United States naval station personnel, numbering 309 in 1920, <sup>2</sup> Including native men enlisted in the U. S. Navy.

The increase in population since the American occupation of the island has been about 3,600, or 37.2 per cent, in 19 years. The increase in the 9

years between 1901 and 1910 was 2,130, or 22 per cent, and that in the 10 years between 1910 and 1920 was 1,469, or 12.4 per cent.

Although the population of Guam has been somewhat increased by immigration during this period. the substantial growth between 1901 and 1920 has been the result mainly of an excess of births over deaths. After the United States assumed control of Guam remarkable improvements in sanitary conditions were inaugurated throughout the island. As a result of these measures the death rate declined from 27.8 per 1,000 population in 1905 to 17.6 per 1,000 population in 1918. The decrease in population between 1918 and 1919 was due in some degree to the disastrous typhoon of July 6, 1918, but chiefly to the epidemic of influenza which swept over the island in October and November of 1918. From November 1 to December 31, 1918, there were 858 deaths, and the death rate for the fiscal year ended June 30, 1919, was 72.3 per 1,000 population.

The apparent decrease in population between 1919 and 1920 may possibly be explained by the fact that the population figures reported by the Governor of Guam for the years 1908 to 1919, inclusive, are careful estimates based on a local census taken in 1903, whereas the figure for 1920 represents the population as actually enumerated.

Race.—The native inhabitants of Guam, who constituted 92 per cent of the population of the island in 1920, are called Chamorros. The name Chamorro is derived from Chamorri or Chamoli, the ancient word for "noble." The Chamorros are a hybrid race, with the Malayan strain predominating. The ancient inhabitants were a warlike people, and most of the adult males were exterminated during the Spanish conquest. Subsequently many of the Spanish, Philippine, and Mexican soldiers who were brought to Guam to subdue the natives married or made concubines of the native women, and the present inhabitants are mainly the descendants of such unions. The various races have amalgamated so thoroughly that even the descendants of Englishmen and Scotchmen now call themselves Chamorros.

Table 2 shows the racial composition of the population of Guam in 1920.

TABLE 2.—POPULATION, BY RACE: 1920.

	POPULATION: 1920.			
RACE.	Total.	Per cent distri- bution,		
All races.	13,275	100.0		
Chamorro Filipino White.	12,216 396	92.0 3.0 2.1		
Japanese. Chinese	280 210 74 42	1.6 0.6 0.3		
Black Not reported	28 29	0.2 0.2		

Nativity.—The population of Guam as enumerated at the census of 1920 included 164 persons who were born in foreign countries or possessions, 95 who were born in the Philippine Islands, and 33 who were born in the United States. The rest of the population, 97.8 per cent of the total, were natives of the island.

Table 3 shows the population of Guam by nativity and sex, while Table 4 gives the population by nativity and race. Most of the Filipinos and a majority of the whites are natives of Guam. Of the 210 Japanese, 77 were born in Japan; and of the 74 Chinese, 5 were born in China.

TABLE 3.—POPULATION, BY NATIVITY AND SEX: 1920.

COUNTRY OF BRITH.	Total.	Males.	Females.
Total	13,275	0,490	6,785
Guam. Asia and Oceania (exclusive of Guam). Philippine Islands.	218	6,264 163 75	6,719 55 20
Japan Marianns Islands Caroline Islands China All others	9 8	. 67 6 5 7	10 16 4 1
North America. United States. All others.	37 33 4	31 27 4	6 6
Europe. Spain. British Isles. All others.	35 17 12 6	30 16 9 5	5 1 3 1
Unknown Born at sea.	1	1 1	

TABLE 4.—POPULATION, BY RACE AND NATIVITY: 1920.

	ΛII		co	LOR OR	RACE.		AAAA AAAAA AAAAAAAAAAAAAAAAAAAAAAAAAAA
COUNTRY OF BIRTH!	races.	Cha- morro.	Fili- pino.	White.	Japa- nese.	Chi- nese.	All other.
Total	13, 275	12,216	396	280	210	74	99
Guam. Philippine Islands	12,983 95 77	12,184 2	313 81	192 12	132	68	94
Japan China United States Other islands or countries	8 33 2 79	28	2	1 31 44	i	5	2 3

<sup>&</sup>lt;sup>1</sup>Includes 42 mixed, 28 blacks, and 29 for whom the race was not reported.
<sup>2</sup>Includes 1 white person born at sea and 1 Chamorro not reporting place of birth.

Sex.—In the population of Guam in 1920 there were 6,490 males and 6,785 females, a ratio of 95.7 males to 100 females. This sex ratio is very different from that of the United States, as shown by the census of 1910—106.2 males to 100 females—but it is similar to the sex ratios of most European countries, the excess of males in the United States being a result of the relatively large number of male immigrants in the total population.

It may be noted that the excess of females in Guam is confined to the native Chamorro population, for which the sex ratio in 1920 is 91.5 males to 100 females. Among the other races represented in the island there is an excess of males, as would be expected, since males usually predominate among immigrants.

In 1901, the only other year for which statistics relating to sex are available, there were 4,566 males and 5,110 females in Guam, a ratio of 89.4 males to 100 females.

TABLE 5 .- POPULATION, BY SEN AND RACE: 1920.

Total.	Males.	Females.
13,275	6,490	6,785
12.216	5.847	6,379
396 590	237	151
210	136	74
74 42	24	26
	15 17	11:
	13,275 12,210 396 280 210 74	13,275 6,490  12,216 5,837 286 176 290 136 74 48 42 24 28 110

As shown by Table 6, the excess of females in Guam is confined to the adult population, or the population 15 years of age and over, for which the ratio is 89.8 males to 100 females, while for the population under 15 it is 104 to 100. This excess of males in the population under 15 years of age is doubtless due partly if not wholly to an excess of male births over female births. The excess of females in the adult population indicates a higher death rate among males than among females, a condition which would not be peculiar to Guam, as in the United States the mortality rates are at all ages higher for males than for females.

TABLE 6.-Population, BY SEX AND AGE: 1920.

. Cart with the care		NUMBER.		FER CENT DISTRIBUTION.			
AGE PERIOD.	Total.	Male.	Fenuale.	Total.	Male.	Female	
All ages	13,275	6,490	6,785	100. 0	100.0	100,	
Inder 5 years	2,235	1,143	1,(8)2	16.8	17.6	16.	
to 9 years	1,829	940	889	13.8	14.5	13.	
0 to 14 years	1,661	83.5	826	12.5	12.9	12.	
5 to 19 years	1,459	7(#)	753	11.0	10,9	11,	
0 to 24 years	1,160	557	603	8.7	8,6	į 8.	
5 to 34 vears	1,772	877	895	13.3	13.5	13.	
5 to 44 years	1,335	648	639	10.1	10.0	10.	
5 10 54 years	1,005	448	557	7.6	6, 9	} 8	
5 to 64 years	529	246	283	4.0	3.8	4	
5 years and over	296	92	198	9.9	1.4	2	

Age.—There was a much larger proportion of children in the population of Guam in 1920 than in the population of the United States in 1910. In 1920 about one-sixth (16.8 per cent) of the inhabitants of Guam were under 5 years of age, while only 11.6 per cent of the population of the United States in 1910 were under that age. More than one-half (54.1 per cent) of the inhabitants of Guam were under 20 years of age, as compared with 42 per cent in the United States. The percentages in each of the age periods over 19 years were somewhat higher in the United States than in Guam.

The relatively high proportion of children in the population of Guam as compared with that of the United States is probably explained, in part at least, by a high birth rate in that island.<sup>2</sup> A further explanation, however, is to be found in the fact that the age composition of the population of the United States is

<sup>&</sup>lt;sup>1</sup> U. S. Bureau of the Census: United States Life Tables, 1910 pp. 18-21.

<sup>2</sup> In 1918 the birth rate in Guam was 47.2 per 1,000 population.

affected by the presence of a large immigrant population, consisting mainly of adults.

The following table shows the per cent distribution, by age periods, of the population of Guam in 1920 and of the United States in 1910:

TABLE 7.—PER CENT DISTRIBUTION, BY AGE, OF THE POPULA-TION OF GUAM AND OF THE UNITED STATES.

	PER CENT DISTRI- BUTION OF POPU- LATION.		
AGE PERIOD.	Guam, 1920.	United States, 1910.	
All ages Under 5 years 5 to 9 years 10 to 14 years 15 to 19 years 20 to 24 years 25 to 34 years 35 to 44 years 55 to 64 years 55 to 64 years	7. 6	110.0 11.6 10.6 9.9 9.9 9.8 16.5 12.7 9.1 5.5 4.3	

Marital condition.—Of the adult male population of the island, 41.7 per cent were single, 51.8 per cent married, and 6.4 per cent widowed or divorced. For the adult female population the corresponding percentages were 39.7, 46.9, and 13.4, respectively. That the percentage married should be higher for males than for females is easily explained by the fact that, while the number of married males is naturally nearly the same as the number of married females, the total number of males in Guam is considerably less than the total number of females.

The number (516) and percentage (13) of widows exceed the number (218) and percentage (6.1) of widowers, for the reason that in Guam, as elsewhere, women marry at a younger age than men, and therefore the marriage is more likely to be terminated by the death of the husband than by that of the wife.

Table 8 shows the adult population of Guam, by sex, age, and marital condition.

If the figures showing the marital condition of the population of Guam are compared with similar figures for the United States, the most striking difference, as shown by Table 9, is in the percentage single among the -women-39.7 in Guam as compared with 29.7 in the United States. Such a difference is a natural or almost inevitable result of the fact that in the United States, as already pointed out, there is an excess of males in the total population and in Guam an excess of females. Since there are, in fact, 3,978 adult females as against 3,572 adult males in Guam, it may be said that 406 adult females in the island are necessarily single, which number is just about 10 per cent of the total adult female population of the island, and would therefore fully account for the difference between that island and the United States as regards the percentage single among females. The percentage of single males

in the adult male population is likewise higher for Guam than it is for the United States, but the difference is not very marked.

Table 8.—Adult Population, by Sex, Age, and Marital Condition: 1920.

							_	***************************************		
	POI	OLATIO	N 15 YE	ARS OF	AGE A	ND OVE	n: 1920,			
SEX AND MARITAL CONDITION.	Total.	15 to 19 years.	20 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years,	65 years and over.		
		NUMBER.								
Males	3,572	706	557	877	646	448	246	92		
Single	1,491 1,852 218 10	699	407 146 3	250 597 28 2	87 506 50 3	35 366 45 2	11 180 54 1	2 50 38 2		
Females	3,978	753	603	895	689	557	283	198		
Single	1,580 1,865 516 14 3	696 57	332 264 7	249 601 37 7 1	129 468 88 2 2	97 320 136 4	45 127 111	32 28 137 1		
			PER C	EŅT DIS	TRIBUT	ion.				
Males	100,0	100.0	100.0	100.0	100.0	100.0	100.0	100. 0		
Single	41.7 51.8 6.1 0.3 (1)	99.0	73, 1 26, 2 0, 5	28.5 68.1 3.2 0.2	13.5 78.3 7.7 0.5	7. 8 81. 7 10. 0 0. 4	4. 5 73. 2 22. 0 0. 4	7.2 54.3 41.3 2.2		
Females	100,0	100.0	100.0	100.0	100.0	100, 0	100.0	100.0		
Single Married. Widowed. Divorced Not reported.	13.0 0.4	92.4	55.1 43.8 1.2	27.8 67.2 4.1 0.8 0.1	18.7 67.9 12.8 0.3 0.3	17.4 57.5 24.4 0.7	15.9 44.9 39.2	16.2 14.1 69.2 0.5		

<sup>1</sup> Less than one-tenth of 1 per cent.

The relatively high proportions of widowed of each sex in Guam are probably explained by the fact that the influenza epidemic which raged throughout the world in the autumn and winter of 1918 was exceedingly fatal in Guam, the death rate having risen from 17.6 per 1,000 population for the fiscal year ended June 30, 1918, to 72.3 per 1,000 population for the following fiscal year.

TABLE 9.—PER CENT DISTRIBUTION, BY MARITAL CONDITION, OF THE ADULT POPULATION OF GUAM AND OF THE UNITED STATES.

	PER CENT DISTRIBUTION OF THE POPULATION 15 YEARS OF AGE AND OVER.						
MARITAL CONDITION.	Ma	le.	Female.				
	United States, 1910.	Guam, 1920.	United States, 1910.	Guam, 1920.			
All classes	100.0	100.0	100.0	100.0			
Single. Married Widowed Divorced. Not reported	38. 7 55. 8 4. 5 0. 5 0. 5	41.7 51.8 6.1 0.3	29. 7 58. 9 10. 6 0. 6 0. 2	39.7 46.9 13.0 0.4 0.1			
	I	1 1					

<sup>1</sup> Less than one-tenth of 1 per cent.

School attendance.—The laws of Guam require all children from 7 to 12 years of age, inclusive, to attend the public schools, and children beyond the compulsory attendance age may continue in the schools on application. As a rule, only half-day sessions for each sex are possible, both on account of the prejudices of the natives and on account of lack of school room. A naval officer is the head of the department of education, with a civilian superintendent of public instruction as administrative officer. In 1919 there were 13 schools in Guam with a corps of 50 teachers and substitute teachers. Most of the American teachers are Federal employees detailed from the Navy Department. They are assigned to the more important schools and classes, the remainder of the teachers being natives educated in the public schools.

Table 10 shows the number and per cent of children attending school in Guam, by sex and age periods.

TABLE 10.-NUMBER AND PER CENT ATTENDING SCHOOL: 1920.

` <u></u>	Во	TH SEX	ES,	1	MALES.		FEMALES.		
AGE PERIOD.	m.i.	Attending school.		,,,,	Attending school.			Attending school.	
	Total.	Num- ber.	Per cent,	Total.	Num- ber.	Per cent.	Total.	Num- ber.	Per cent.
5 to 19 years of age.	4,949	2,122	42. 9	2,481	1,151	46. 4	2,468	971	39.3
5 to 9 years	1,829 1,661 1,459	853 1,162 107	46. 6 70. 0 7. 3	940 835 706	448 643 60	47. 7 77. 0 8. 5	889 826 753	405 519 47	45.6 62.8 6.2

At the census of 1920 only 42.9 per cent of the population 5 to 19 years of age, inclusive, reported that they had attended school at some time since September 1, 1919. This percentage is very much lower than the corresponding percentage of school attendance in the United States (62.6) shown by the census of 1910. The relatively poor school attendance in Guam is due almost entirely to inadequate public revenues for educational purposes. Although the total figures indicate poor school attendance, it should be noted that over three-fourths (77 per cent) of the boys and 62.8 per cent of the girls 10 to 14 years of age were reported as attending school. In the United States in 1909-10, 87.7 per cent of the boys and 88.6 per cent of the girls 10 to 14 years of age attended school. The higher proportion of males (46.4 per cent) than of females (39.3 per cent) attending school in Guam is explained in part by the indifference of the natives to the education of girls.

Comparative statistics of school attendance in Guam derived from the annual reports of the governor for the fiscal years 1906 to 1919 (except 1914 and 1915, for which years no figures are available), together with comparable figures derived from the census of 1920, are shown in the following table:

TABLE 11.—NUMBER ATTENDING SCHOOL: 1906 TO 1920.1

SCHOOL YEAR.	Total.	7 to 12 years	Over 12 years.
906 907	. 1,620 1,601	1,592	28
968 960	1,5%	1,392 1,471	196 134
910 911	1,790 1,637	1,730 1,559	60 78
912 913	1,622	1.473	151
916 917	1,763	1,212 1,521	551 342
918 919	1	1,341 1,341 1,729	296 394 385

<sup>1</sup> Figures for the school years 1914 and 1915 are not available.
<sup>2</sup> Number reported in the census taken in January, 1933, as having attended school since Sept. 1, 1919.

The total number of children attending school in Guam increased from 1,620 in 1906 to 2,117 in 1920, an increase of 30.7 per cent in 14 years. The marked decrease in attendance between June, 1918, and June, 1919, was due mainly to the high mortality resulting from the influenza epidemic of 1918, but also to the typhoon of July 6, 1918, which seriously damaged many schoolhouses.

An interesting and significant development in the educational policy of Guam was the introduction in February, 1917, of compulsory physical and military training for all schoolboys 7 to 16 years of age. In 1919 there were 946 boys enrolled for this training. At the age of 16 the boys pass automatically into the Guam militia. They remain in the militia until they reach the age of 23, when they may, upon request, retire from active duty.

Illiteracy.—In 1920, 2,011 persons, or 21.8 per cent of the population of Guam 10 years of age and over, were reported as unable to write, and of this number, 1,526, or one-sixth of the population, could neither read nor write. The percentage of illiterate females (29.6) is more than double that of males (13.3), the relatively high illiteracy rate for females being due mainly to the indifference of the natives to the education of girls.

The table at the top of the following page shows the number and per cent distribution of literate and illiterate in the population of Guam 10 years of age and over, by sex.

TABLE 12.—Number and Per Cent Literate and Illiterate in the Population, by Sex; 1920.

	POPULATION 10 YEARS OF AGE AND OVER.						
	To	tal.	Mı	ıle.	Female.		
	Num- ber,	Per cent distri- bution,	Num- ber.	Per cent distri- bution.	Num- ber.	Per cent distri- bution.	
Total	9, 211	100.0	4,407	100.0	4,804	100.0	
Literate 1	7, 200	78.2	3, 819	86.7	8,381	70.4	
Unable to write	2,011 485 1,526	21.8 5.3 16.5	588 109 479	13.3 2.5 10.8	1,423 376 1,047	29.6 7.8 21.8	

· I Able to read and write.

The percentages of illiteracy are very much higher for the age groups over 24 years than they are for persons under that age, owing to the fact that the older people of Guam have never received the benefits of the American system of public schools. Under the earlier Spanish governors public education in Guam was discouraged, because the rulers believed that the natives would be more tractable if they remained

illiterate. In later years, however, free schools were established, and by the time the United States assumed control of the island a majority of the natives could read and write in Spanish. The efforts of the Americans to teach the Chamorro children to use the English language have not been very successful up to the present time.

Table 13 shows the number and per cent illiterate in the population of Guam 10 years of age and over,

by sex and by age periods.

A comparison of the percentage of illiteracy in Guam (21.8) in 1920 with that of the United States (7.7), as shown by the report of the census of 1910, demonstrates the effectiveness of the public-school system in reducing the illiteracy rate of the United States as a whole. It is noteworthy, however, that the percentage of illiterates among Negroes in the United States in 1910 (30.4) was very much higher than the illiteracy rate of Guam. For the age periods under 25 years the percentages of illiteracy in Guam in 1920 are not much higher than those for the total population of the United States in 1910, the rates for the age period 15 to 19 years being practically the same.

TABLE 13.—PERSONS RETURNED AS ILLITERATE, BY SEX AND AGE: 1920.

	В	OTH SEXE	3.		MALES.		FEMALES.			
AGE PERIOD.		Illiterate.1			Illiterate.1			Illite	rate,1	
	Total.	Number.	Per cent.	Total.	Number.	Per cent.	Total.	Number.	Per cent.	
Population 10 years of age and over	9,211	2,011	21.8	4,407	588	13.3	4,804	1,423	29.0	
10 to 14 years. 15 to 19 years. 20 to 24 years. 25 to 34 years. 35 to 44 years. 45 to 54 years. 45 to 54 years. 55 to 64 years. 65 years and over.	1,459 1,160 1,772 1,335	142 73 94 383 434 441 252 189	8.5 5.0 8.1 21.6 32.5 44.2 47.6 65.2	835 706 557 877 646 448 246 92	67 27 29 108 129 111 82 35	8.0 3.8 5.2 12.3 20.0 24.8 33.3 38.0	* 826 753 603 805 689 557 283 198	75 46 65 275 305 333 170 151	9. 1 6. 1 10. 8 30. 7 44. 3 59. 8 60. 1 77. 8	

1 Illiteracy is defined as inability to write in any language.

The percentages of illiteracy in the population of Guam in 1920 and of the United States in 1910 are shown, by age periods, in the following table:

Table 14.—Per Cent Illiterate in the Population of Guam and of the United States, by Age Periods.

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		PER CEN	T ILLITE	RATE.			
AGE PERIOD.		United States; 1910.					
	Guam: 1920,	Ali classes,	Native white.	For- eign- born white.	Negro.		
Population 10 years of age and over.		7,7	3.0	12,7	30, 4		
10 to 14 years. 15 to 19 years 20 to 24 years 25 to 34 years. 35 to 44 years. 45 to 54 years. 55 to 64 years. 65 years and over.	5.0 8.1 21.6 32.5 44.2	4.1 4.9 6.9 7.3 8.1 9.9 12.0 14.5	1.7 1.9 2.3 2.4 3.0 4.5 6.0 7.3	3.5 12.8 15.3 14.4 12.3 11.0 11.1	18, 9 20, 3 23, 9 24, 6 32, 3 47, 0 63, 0 74, 5		

Ability to speak English.—The total number of persons in Guam who reported that they were able to speak English was 4,384—2,542 males and 1,842 females. They constituted almost one-half (47.6 per cent) of the population of Guam 10 years of age and over. A much larger proportion of the males (57.7 per cent) than of the females (38.3 per cent) 10 years of age and over reported ability to speak English.

Occupations.—The occupation returns of the census of 1920 show clearly that agriculture is the chief industry of Guam. More than one-half (52.2 per cent) of the population for whom occupations were returned were engaged in agriculture and animal husbandry. Nearly all of these (97.9 per cent) were males, and they constituted 60.9 per cent of all males engaged in gainful pursuits.

The next largest occupation group, composed of those engaged in manufacturing and mechanical industries, numbers 786 and constitutes nearly one-

Table 12.—Number and Per Cent Literate and Illiterate in the Population, by Sex: 1920.

	POPULATION 10 YEARS OF AGE AND OVER.							
	To	tal.	Mt	ıle.	Female.			
	Num- ber,	Per cent distri- bution.	Num- ber.	Per cent distri- bution,	Num- ber.	Per cent distri- bution,		
Total	9,211	100, 0	4,407	100.0	4,804	100.0		
Literate 1	7,200	78.2	3,819	86.7	3,381	70.4		
Unable to write	$\begin{array}{c} 2,011 \\ 485 \\ 1,526 \end{array}$	21.8 5.3 16.5	588 109 479	13.3 2.5 10.8	1,423 376 1,047	29.6 7.8 21.8		

- 4 Able to read and write.

The percentages of illiteracy are very much higher for the age groups over 24 years than they are for persons under that age, owing to the fact that the older people of Guam have never received the benefits of the American system of public schools. Under the earlier Spanish governors public education in Guam was discouraged, because the rulers believed that the natives would be more tractable if they remained

illiterate. In later years, however, free schools were established, and by the time the United States assumed control of the island a majority of the natives could read and write in Spanish. The efforts of the Americans to teach the Chamorro children to use the English language have not been very successful up to the present time.

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Table 13 shows the number and per cent illiterate in the population of Guam 10 years of age and over,

by sex and by age periods.

A comparison of the percentage of illiteracy in Guam (21.8) in 1920 with that of the United States (7.7), as shown by the report of the census of 1910, demonstrates the effectiveness of the public-school system in reducing the illiteracy rate of the United States as a whole. It is noteworthy, however, that the percentage of illiterates among Negroes in the United States in 1910 (30.4) was very much higher than the illiteracy rate of Guam. For the age periods under 25 years the percentages of illiteracy in Guam in 1920 are not much higher than those for the total population of the United States in 1910, the rates for the age period 15 to 19 years being practically the same.

TABLE 13.—PERSONS RETURNED AS ILLITERATE, BY SEX AND AGE: 1920.

	В	otn Sexes	3.		MALES,	at a management of the second	FEMALES,			
AGE PERIOD.		Illiterate.1			Illiterate.1		Total.	Illite	rate,1	
	Total.	Number.	Per cent.	Total.	Number.	Per cent.	rotai.	Number.	Per cent.	
Population 10 years of age and over	9,211	2,011	21.8	4, 107	588	13.3	4,804	1,423	29.6	
10 to 14 years. 15 to 19 years. 20 to 24 years. 25 to 34 years. 35 to 44 years. 45 to 54 years. 55 to 64 years. 65 years and over.	1,459	142 73 94 383 434 444 252 189	8.5 5.0 8.1 21.6 32.5 44.2 47.6 65.2	835 706 557 877 646 448 246 92	67 27 29 108 129 111 82 35	8,0 3,8 5,2 12,3 20,0 24,8 33,3 38,0	• 826 753 603 805 689 557 283 198	75 46 65 275 305 333 170 154	9.1 6.1 10.8 30.7 44.3 59.8 69.1 77.8	

1 Illiteracy is defined as inability to write in any language.

The percentages of illiteracy in the population of Guam in 1920 and of the United States in 1910 are shown, by age periods, in the following table:

Table 14.—Per Cent Illiterate in the Population of Guam and of the United States, by Age Periods.

	PER CENT ILLITERATE.									
AGE PERIOD.		United States: 1910.								
	Guam: 1920.	All clusses.	Native white.	For- eign- born white,	Negro.					
Population 10 years of ago and over.  10 to 14 years	8.5 5.0 8.1 21.6 32.5 44.2	7.7 4.1 4.9 6.9 7.3 8.1 9.9	3.0 1.7 1.9 2.3 2.4 3.0 4.5	12.7 3.5 12.8 15.3 14.4 12.3 11.0	30. 4 18. 9 20. 3 23. 9 24. 6 32. 3 47. 0					
55 to 64 years	47. 6 65. 2	12.0 14.5	6, 0 7, 3	11, 1 13, 8	63. 0 74. 5					

Ability to speak English.—The total number of persons in Guam who reported that they were able to speak English was 4,384—2,542 males and 1,842 females. They constituted almost one-half (47.6 per cent) of the population of Guam 10 years of age and over. A much larger proportion of the males (57.7 per cent) than of the females (38.3 per cent) 10 years of age and over reported ability to speak English.

Occupations.—The occupation returns of the census of 1920 show clearly that agriculture is the chief industry of Guam. More than one-half (52.2 per cent) of the population for whom occupations were returned were engaged in agriculture and animal husbandry. Nearly all of these (97.9 per cent) were males, and they constituted 60.9 per cent of all males engaged in gainful pursuits.

The next largest occupation group, composed of those engaged in manufacturing and mechanical industries, numbers 786 and constitutes nearly onefifth (19.2 per cent) of the total number reporting occupations. Included in this group are 422 laborers in nonspecified industries. Males constitute 91.7 per cent of those engaged in manufacturing and mechanical pursuits.

Table 15.—Number and Per Cent Distribution of the Population of Each Sex Engaged in Gainful Pursuits, by Occupations: 1920.

	POP	ULATIO P	N ENGA	GED 19 1: <b>1</b> 920.	GAIN	FUL
OCCUPATION.	Tot	al,	Ma	le.	Fer	nale,
	Num- ber.	Per cent dis- tribu- tion.	Num- ber	Per cent dis- tribu- tion.	Num- ber.	Per eent dis- tubu- tion.
All occupations	4,087	100.0	3,430		657	0.00.
Agriculture and animal husbandry	493	52. 2 12. 1	2,090 483	60.9	41 10	1.5
illed Farmers and ranchers Fishermen All others	141 1, 469 15 16	3, 4 35, 9 0, 4 0, 4	111 1,435 15 16	4.1 41.8 0.4 0.5	34	5.2
Extraction of minerals	4 4	8			4	0.6 0.6
Manufacturing and mechanical industries. Apprentices, skilled trades. Blacksmiths Carpenters Dressmakers and seamstresses. Foremen, not specified Laborers, not specified Machinists Shoemakers. Silversmiths Tailors and tailoresses. Weavers. All others.	14 27 113 12 18 422 24	19.2 0.3 0.7 2.8 0.3 0.4 10.3 0.6 0.5 0.3 0.4 1.1 1.5	721 14 27 113 18 422 24 20 12 6 5	21.0 0.4 0.8 3.3 0.5 12.3 0.7 0.6 0.3 0.2 0.1 1.8	65 12 9 41 3	1.4
Transportation Cable operators Chauffeurs All others	81 2 26 43 12	2.0 0.6 1.1 0.3	79 2 26 43 10	2.3 0.7 1.3 0.3	2 2	0.3
Trade. Merchants and storekeepers. Salesmen and saleswomen. All others.	90 67 15 8	$ \begin{array}{c c} 2.2 \\ 1.6 \\ 0.4 \\ 0.2 \end{array} $	50 62 10 8	2.3 1.8 0.3 0.2	10 5 5	1.5 0.8 0.8
Public service	187	4.6	187	5.5		
Commissioners and deputy commissioners. United States Navy employees—	15	0.4	15	0.4		· · · · · ·
United States Navy employees— Enlisted men Seamen All others in naval service All others.	74 49 24 25	1.8 1.2 0.6 0.6	74 49 24 25	2.2 1.4 0.7 0.7		
Professional service. Missionaries. Teachers, school All others.	76 13 49 14	1. 9 0. 3 1. 2 0. 4	45 13 20 12	1.3 0.4 0.6 0.3	31 29 2	4. 7 4. 4 0. 3
Domestic and personal service. Cooks Laundresses Midwives Nurses. Servants. All others.	677 52 316 11 12 272 14	16.6 1.3 7.7 0.3 0.3 6.7 0.3	178 29 135 14	5.2 0.8 3.0 0.4	499 23 316 11 12 137	76.0 3.5 48.1 1.7 1.8 20.9
Clerical occupations Bookkeepers and elerks Messengers and office boys All others.	52 32 16 4	1.3 0.8 0.4 0.1	50 30 16 4	1.5 0.9 0.5 0.1	2 2 	0.3

<sup>&</sup>lt;sup>1</sup> Less than one-tenth of 1 per cent. <sup>2</sup> Includes 2 apprentice cable operators.

Domestic and personal service employed one-sixth of the occupied population, nearly three-fourths (73.7 per cent) of those so employed being females.

All persons returned as engaged in public service in Guam were males. They numbered 187 and constituted 5.5 per cent of the total number of occupied males.

Table 15 shows the number and per cent of persons in Guam engaged in each specified occupation and in each occupation group, by sex.

Table 16 shows the occupations of the population of Guam by color or race. Over one-half (54.2 per cent) of the Chamorros for whom occupations were reported were employed in agriculture and animal husbandry. There are no factories in Guam, but 695, or 18.9 per cent, of the Chamorros reported that they were employed in various building and hand trades and as laborers in nonspecified industries. Over one-sixth (17.2 per cent) of the Chamorros were engaged in domestic and personal service.

Table 16.—Population Engaged in Gamful Pursuits, by Occupation Groups and Color of Race: 1920.

		ì	(	COLOR 6	R RACE	. <b>.</b>	
occupation group.	Total.	Cha- morro.	Fili- pino.	White.	Japa- nese,	Chi- nese.	All other.
All occupations	4,087	3,684	156	107	91	39	29
Agriculture and animal bus- bandry. Extraction of minerals	2, 134 4	1, 99 <b>7</b>	72	21	16	15	12
danufacturing and meetian- lealindustries <sup>1</sup> Fransportation	786 81	695 65	3 t 1	25 14	19	7	
Prade Tublie service Tolessional service	(90) 187 70	38 166 47	6 10 9	10 9 20	34	1	
Domestic and personal service Terical occupations	677 52	632 40	18 6	5	10 2	6	

<sup>1</sup> Includes 422 laborers in nonspecified industries.

Working children.—In 1920 one person in each ten of the population of Guam for whom specific occupations were reported in the census was a child under 17 years of age. Most of these working children (89.1 per cent) were over 12 years of age, the maximum age for compulsory school attendance. Nearly 80 per cent (79.1) were boys, and almost all of them (94.2 per cent) were native Chamorro children.

Table 17 shows the number of working children in Guam, by age and sex; and Table 18 shows the principal occupations of these children and the percentage which they formed of the total number of persons engaged in each specified occupation, by sex.

TABLE 17 .- NUMBER OF WORKING CHILDREN, BY RACE, SEX, AND AGE: 1920.

The Advances of Special Advances of the Control of	WO!			EN UN			S OF A	GE: 19	20.	
AGE,		Total.		c	hamori	ro.	All other.1			
	Both sexes.	Male.	Fe- male.	Both sexes.	Male.	Fe- nule.	Both sexes.	Male.	Fe- male.	
9 to 16 years	412	326	86	388	305	83	24	21	3	
9 years 10 years 11 years 12 years 13 years 14 years 15 years 16 years 16 years	4 12 7 22 38 76 96 157	1 5 3 14 25 66 86 126	3 7 4 8 13 10 10	4 12 6 22 36 69 88 151	1 5 3 14 24 60 78 120	3 7 3 8 12 9 10 31	1 7 8 6	1 6 8 6	1	

<sup>&</sup>lt;sup>4</sup> Includes 8 Filipinos, 6 whites, 3 Japanese, 3 Chinese, 3 mixed, and 1 not specified,

Nearly one-half (49.5 per cent) of the working children of Guam were returned as farm laborers, constituting 32.2 per cent of all persons so returned in the census. All but I of them were boys, and all but 18 were employed on home farms. More than one-half (51.9 per cent) of the males and 40.9 per cent of the females returned as servants were children under 17 years of age. It is noteworthy that 5 children—2 boys and 3 girls—were returned as school-teachers.

TABLE 18.—Occupations of the Working Children, by Sex: 1920.

A complete as a complete of the company of the Comp	POPUL	ATION	ENGA	ED IN	GAIN	FUL C	CCUPA	TIONS:	1920.	
	Во	th sexe	es.		Male,		Femule.			
occupation.	Under 17 years.		Total.	Under 17 years.		Total.	Und Ver	er 17 irs.		
	10001	Num- ber.	Per cent.		Num- ber.	Per cent.	T OSHI.	Num- ber,	Per cent.	
All occupations	4,087	412	10.1	3,430	326	9.5	657	80	13.1	
Farm laborersOn home farmWorking out	634 493 141	204 2 186 18	32. 2 37. 7 12. 8	624 483 141	203 2 185 18	32. 5 38. 3 12. 8	10 10	1 1	(1) (1)	
Domestic and personal service. Servants. Laundresses. All others.	677 272 316 89	151 126 20 5	22.3 46.3 6.3 (1)	178 135 43	73 70 3	41.0 51.9 (1)	499 137 316 46	78 56 20 2	15.0 40.9 6,8 (1)	
Laborers (not specified)	422	25	9.	422	25	5.9				
Clerical occupations Messengers and office boys	52 16	10 8	(1)	50 16	10 8	(1) (1)	2			
Bookkeepers and elerks All others	32 4	2	(1)	30	2	(1)	2			
Apprentices, skilled trades	14 49 2,239	3 g 5 8	(1) (1) 0.4	14 20 2,122	8 9 2 4	$\begin{pmatrix} 1 \\ (1) \\ (1) \\ 0.2 \end{pmatrix}$	29 117	3 4	(¹) 3.4	

Percentages omitted when base is less than 100.
 Includes 3 males returned as farmers,
 Includes 2 males returned as blacksmiths.

TABLE 19.—POPULATION BY BARRIOS, CITIES, AND TOWNS, AND BY RACE AND SEX: 1920.

								POPUI	LATION	1920.		٠							
BARRIO, CITY, AND TOWN.				Chan	iorro.	Filij	pino.	Wh	ite.	Japa	nese.	Chir	nese.	Bla	.ck.	Mi	red.	Allo	other.
	Total.	Male.	Female.	Male.	Female.	Male.	Fc- male.	Male.	Fe- male.	Male,	Fe- male,	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male
Guam	13,275	6,490	6,785	5,837	6,379	237	159	176	104	136	74	48	26	15	13	24	18	17	12
Agana city 1	7, 432 757 345 180 369	3,595 373 160 90 197	3,837 384 185 90 172	3, 153 357 155 86 174	3,534 379 183 90 153	186 3 3 0	127 1 10	131 5 2 2	96 1 1	73 7	37 3	$egin{array}{c} 22 \\ 1 \\ 2 \\ \cdots \\ 1 \\ \end{array}$	15	12	13	10	10	8	
Inarajan District; Aga. Bubulao Inarajan town Malolos.	27 60 612 39	12 29 299 19	15 31 313 20	12 29 287 19	15 31 305 20			i		10	8		••••					i	
Machano barrio Merizo town Pago barrio Piti town Sinajana barrio Sumay town	28 655 30 429 204 795	16 323 13 206 107 400	12 332 17 223 97 305	16 316 7 186 98 345	12 331 11 207 95 375	5 6 6 8	6 3 1 5	1  25	4	1 14 8	13	4	1	1		1		3 3	
Talofofe barrio Tepunjan barrio Umatóe barrio Yigo barrio Yona municipality	215 240 327 107 424	103 108 162 60 218	112 132 165 47 206	96 •94 159 47 201	107 127 164 43 197	 1 3 10	6	8 1	i 	6 2 7 7	3 1 3 2	5	1 4 1					1	

<sup>&</sup>lt;sup>1</sup> Includes the populations of Anigua (321), Tutujan (56), and Moina (28).

#### AGRICULTURE.

Field crops.—A census of agriculture was taken in Guam in connection with the census of population. The statistics of production relate to the calendar year 1919.

As measured by the number of acres reported under cultivation in 1919, corn is by far the most important field crop of Guam, representing 60.3 per cent of the total. During that year, 28,947 bushels of corn

were harvested, averaging 13.3 bushels to the acre. Two other crops of importance are sweet potatoes and taro. The sweet potato crop in 1919 totaled 13,671 bushels, an average yield of  $25\frac{1}{2}$  bushels per acre. The average yield of taro was 2,710 per acre.

Table 20 shows the acreage, quantity produced, and average yield per acre of nine different field crops of Guam in 1919.

Table 20.—Acreage, Quantity Produced, and Average Yield per Acre of Specified Agricultural Products: 1919.

,		RES ESTED.	QUANTITY PRODUCED,			
PRODUCT.	Num- ber.	Per cent distri- bution.	Total amount.	tīnit.	Aver- age yield per acre.	
Total	3,606	100.0	********			
Corn Sweet polatoes Sweet polatoes Taro Yams Tobaceo. Cassava Rice. Arrowroot Sugar	2,173 536 473 160 81 80 58 32 13	60. 3 14. 9 13. 1 4. 4 2. 2 2. 2 1. 6 0. 9 0. 4	28,947 13,671 1,281,861 12,104 36,261 103,513 615 34,256 21,200	Bu Lbs. Lbs. Eu Lbs.	25. 5 2,710. 1 75. 7 447. 7 1,293. 9	

The island of Guam is not at present self-supporting, but it is believed that it could be made so by the proper development of its agriculture. There is more arable land in Guam than the present population can cultivate with the means at hand. Most of the farmers live in the towns and go to and from their farms on foot or in bull earts, thus wasting much time. The greater part of the farming is done with crude hand tools, but modern plows and other agricultural implements are being gradually introduced. On account of the very shallow layer of soil over the "cascajo" (coral limestone), only a comparatively small amount of land can be cultivated with animal-drawn implements. About one-half of the total area of the island is suitable for agriculture and pasturage.

Owing to the fact that there are at present no facilities for storing food crops and also because of the lack of good roads, there is little incentive for the native farmers of Guam to produce more food than is required for their own immediate consumption.

In 1919 the island government opened a public market at Agana, to which the native farmers may bring their produce for sale. The United States Department of Agriculture maintains two experiment farms in Guam primarily to teach the natives modern methods of farming and to stimulate interest in the breeding of live stock.

Tree products.—Coconuts are the most important of the tree products of Guam. In 1919, 61.2 per cent of all the fruit and seed bearing trees reported in the census were coconut trees, and they yielded approximately 7,650,000 coconuts, or an average of 19 per tree. Not only are coconuts used extensively as food by all of the natives, but copra, or dried coconut meat, from which the oil is later expressed, is the chief product for export from Guam. The following table shows the amount of copra exported from Guam to the United States and to Japan from 1915 to 1919, inclusive:

TABLE 21.-EXPORTS OF COPRA GUAM.

The efficiency of the American Street and American Control of the	COUNT DESTIN	
FISCAL YEAR.	United States.	Japan.
Tots1	Pietrods, 5,357,688	Pounds. 4,005,973
1015. 1916. 1917. 1918.	$\begin{array}{c} 259,360 \\ 9^{\circ}2,670 \\ 1,472,576 \\ 1,502,216 \\ 1,140,921 \end{array}$	$\begin{array}{c} 731,180 \\ 958,958 \\ 761,471 \\ 992,681 \\ 851,680 \end{array}$

<sup>4</sup> From annual reports of the Governor of Guam for the fiscal years ended June 30.

Banana trees constituted nearly one-fourth (23.9 per cent) of the fruit and seed bearing trees of Guam, yielding 117,298 bunches in 1919. Tropical fruits are not produced for export from Guam at present, but coffee and cacao of excellent quality are now grown and could be profitably cultivated for export.

Table 22 shows the number of the principal fruit and seed bearing trees of Guam, the amount of their products, and the average yield per tree in 1919.

Table 22.—Number of Trees, Quantity of Products, and Average Yield per Tree of Specified Fruit and Seed Trees: 1919.

AND CONTROL OF THE PROPERTY OF				
VARIETY.	TREES.		QUANTITY PRODUCED.	
	Number.	Per cent distri- bution.	Total amount.	Aver- age yield per tree.
Total.	660,791	100.0		
Coccouts.	401,581	61.2	7,643,200	19.0
Bananas,		23.9	2 117, 298	(4)
Pineapples	42,637	6.5	29,928	(4)
Coffee	32,191	4.9	8 19,553	3 0.6
Breadfruit	15,970	2.4	1,003,700	63.0
Oranges	2,738	0.4	394,700	142.0
Lemons	1,902	0.3	205,100	103.0 12.0
Papaya	1,247	0.1	15,288 9 182	80.4
Cacaó. Limes.	367	(1)	59,000	240.0
Mangoes.		(6)	32,652	115.0
Alligator pears		(1)	5,832	85.0
Grapeirnit		(6)	1,392	42.0
	1		11	4

<sup>1</sup> Less than one-tenth of 1 per cent.
2 Bunches.

Live stock.—The number and varieties of live stock not on farms enumerated in Guam included 6,149 carabao, 4,367 horses, 1,160 goats, 543 hogs, and 73 cattle.

It will be noted that there are much larger numbers of carabao than of horses on the island. The carabao, or water buffalo, is the chief burden-bearing animal of Guam, being used both for drawing carts and for plowing. The natives seldom cat the meat of the carabao; and although its milk is of excellent quality, it is rarely used for food.

Neither horses nor cattle have multiplied rapidly since their introduction into Guam. The island government, however, has acquired a small herd of fine cattle and is endeavoring to interest the native farmers in scientific methods of stock breeding and raising.

Founds.
Less than one.